

4.8 FUNCTIONS AND RELATIONS

Function: For each input, there is exactly one output.

Relation: any set of ordered pairs.

Domain: collection of all input values

Range: collection of all output values

$f(x)$ is
function
notation

the value of
 f at x , or
 f of x

Decide if the following are functions. If so, state the domain and range.

Ex 1

INPUT OUTPUT

1 \rightarrow 5

2 \rightarrow 4

3 \rightarrow 3

4 \rightarrow 2

FUNCTION

Domain: 1, 2, 3, 4

Range: 2, 3, 4, 5

INPUT OUTPUT

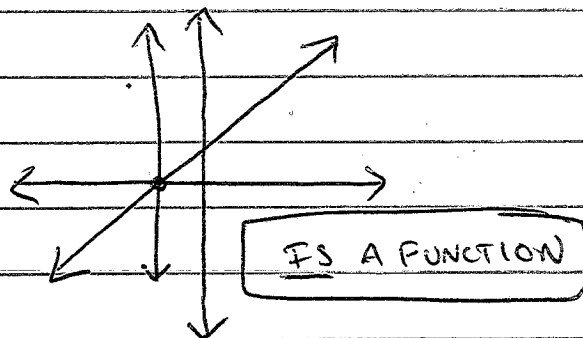
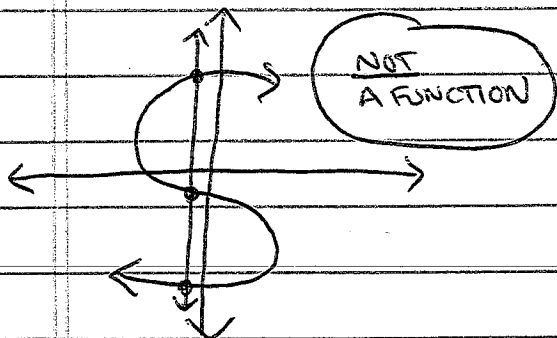
7 \rightarrow 7

9 \rightarrow 9

10 \rightarrow 8
10 \rightarrow 10

NOT A FUNCTION

VERTICAL LINE TEST



$f(x) = y$, so $f(x) = \frac{3}{5}x + 4$ is the same as
 $y = \frac{3}{5}x + 4$

Homework: WORKSHEET 4.8 B ODDS